

IN THE CLAIMS

Please amend the claims as indicated below. The following listing of claims will replace all prior versions and listings of claims in the application:

Claims 1-19 (cancelled)

Claim 20 (currently amended): A method of preventing or treating a disease in a host, comprising administering to the host an effective amount of a vaccine comprising a modified *Listeria monocytogenes* bacterium, wherein the ~~nucleic acid of the modified bacterium comprises (i)~~ psoralen-induced interstrand crosslinks introduced between the strands of genomic DNA double helix, said interstrand crosslinks inhibiting replication of said modified ~~adducts that attenuate the modified bacterium for proliferation relative to the bacterium without the adducts, wherein the bacterium further comprises a (ii) one or more genetic mutations in *uvrA* and *uvrB* genes inhibiting excision repair of said interstrand crosslinks, and (iii) a nucleic acid sequence encoding a polypeptide heterologous to said *Listeria monocytogenes* bacterium operably linked to a promoter sequence directing expression of the heterologous polypeptide by the modified bacterium that attenuates the ability of the bacterium to repair its modified nucleic acid relative to wild type.~~

Claim 21 (currently amended): A method of inducing an immune response in a host to an antigen comprising administering to the host an effective amount of a vaccine comprising a modified *Listeria monocytogenes* bacterium, wherein the ~~nucleic acid of the modified bacterium comprises (i)~~ psoralen-induced interstrand crosslinks introduced between the strands of genomic DNA double helix, said interstrand crosslinks inhibiting replication of said modified ~~adducts that attenuate the modified bacterium for proliferation relative to the bacterium without the adducts, (ii) one or more genetic mutations in *uvrA* and *uvrB* genes inhibiting excision repair of said interstrand crosslinks, and (iii) a nucleic acid sequence encoding~~ wherein the modified bacterium expresses the antigen operably linked to a promoter sequence directing expression of the antigen by the modified bacterium, wherein said antigen is heterologous to said *Listeria monocytogenes* bacterium.

Claims 22-86 (cancelled)

Claim 87 (currently amended): The method of claim 20, wherein the interstrand crosslinks are introduced ~~nucleic acid of the modified bacterium has been modified~~ by reaction with 4'-(4-amino-2-oxa)butyl-4,5',8-trimethylpsoralen activated by irradiation.

Claims 88-105 (cancelled)

Claim 106 (currently amended): The method of claim ~~20~~99, wherein the genetic mutations in *uvr* gene(s) comprise deletions in the ~~is in one or more gene selected from the group consisting of *uvrA*, and *uvrB*, and *uvrC* genes such that the modified bacterium does not produce functional *uvrA* and *uvrB* gene products.~~

Claim 107 (cancelled)

Claim 108 (withdrawn): The method of claim 107, wherein the *Listeria* further comprises a mutation in the *actA* gene, the *inlB* gene, or both genes, wherein the mutation in the *actA* gene attenuates the ability of the *Listeria* to spread relative to wild type and the mutation in the *inlB* gene attenuates the ability of the *Listeria* to invade at least some cells relative to wild type.

Claim 109 (cancelled)

Claim 110 (previously presented): The method of claim 20, wherein the vaccine further comprises a pharmaceutically acceptable carrier or an adjuvant.

Claim 111 (currently amended): The method of claim 20, wherein the bacterial gene expression of the bacterium is substantially unaffected by the interstrand crosslinks ~~modification of the nucleic acid of the bacterium.~~

Claim 112 (previously presented): The method of claim 20, wherein the disease is an infectious disease.

Claim 113 (currently amended): The method of claim ~~20~~109, wherein the disease is cancer.

Claims 114-117 (cancelled)

Claim 118 (currently amended): The method of claim 21, wherein the interstrand crosslinks are introduced ~~nucleic acid of the modified bacterium has been modified~~ by reaction with 4'-(4-amino-2-oxa)butyl-4,5',8-trimethylpsoralen activated by irradiation.

Claims 119-136 (cancelled)

Claim 137 (currently amended): The method of claim 21, wherein the genetic mutations in *uvr* gene(s) comprise deletions in the is in one or more gene selected from the group consisting of *uvrA*, *uvrB*, and *uvrC* genes such that the modified bacterium does not produce functional *uvrA* and *uvrB* gene products.

Claim 138 (cancelled)

Claim 139 (withdrawn): The method of claim 138, wherein the *Listeria* further comprises a mutation in the *actA* gene, the *inlB* gene, or both genes, wherein the mutation in the *actA* gene attenuates the ability of the *Listeria* to spread relative to wild type and the mutation in the *inlB* gene attenuates the ability of the *Listeria* to invade at least some cells relative to wild type.

Claim 140 (cancelled)

Claim 141 (previously presented): The method of claim 21, wherein the vaccine further comprises a pharmaceutically acceptable carrier or an adjuvant.

Claim 142 (currently amended): The method of claim 21, wherein the bacterial gene expression of the bacterium is substantially unaffected by the interstrand crosslinks ~~modification of the nucleic acid of the bacterium.~~

Claim 143 (currently amended): The method of claim ~~21~~140, wherein the antigen is a tumor antigen.

Claim 144 (previously presented): The method of claim 143, wherein the tumor antigen is mesothelin, SPAS-1, proteinase-3, SP-17, gp100, PAGE-4, TARP, Her-2/neu, WT-1, NY-ESO-1, PSMA, K-ras, survivin, mcm-2, or CEA, or an antigen derived from mesothelin, SPAS-1, proteinase-3, SP-17, gp100, PAGE-4, TARP, Her-2/neu, WT-1, NY-ESO-1, PSMA, K-ras or CEA.

Claim 145 (currently amended): The method of claim ~~21~~140, wherein the antigen is an infectious disease antigen.

Claim 146 (previously presented): The method of claim 145, wherein the antigen is derived from a Human Immunodeficiency Virus or a hepatitis virus.

Claim 147 (previously presented): The method of claim 146, wherein the antigen is derived from hepatitis C virus.

Claims 148-189 (cancelled)